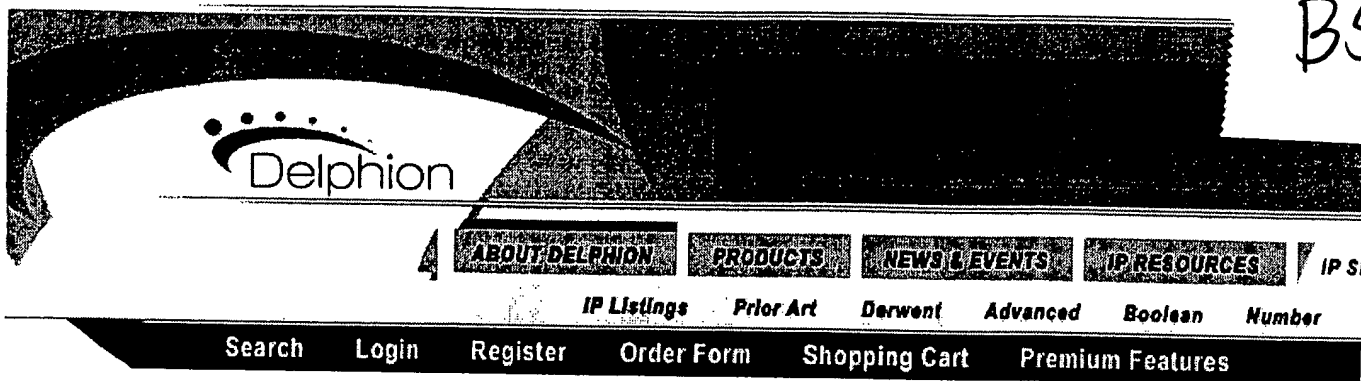


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JP58194798A2: APPARATUS FOR GROWTH OF FLAT PLATE SILICON CRYSTAL

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Country: **JP Japan**

Kind:

Inventor(s): **MAKI NAOAKI**

Applicant(s): **TOSHIBA CORP**
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Issued/Filed Dates: **Nov. 12, 1983 / May 7, 1982**

Application Number: **JP1982000075155**

IPC Class: **C30B 29/06; C30B 15/00; C01B 31/02; H01L 21/18;**

Abstract:

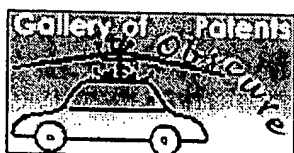
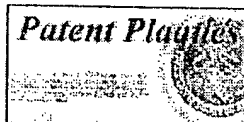
Purpose: To stabilized the preparation of a flat plate Si crystal by the pulling of the crystal from molten Si using a pair of strings, by coating the end parts of the strings with silicon nitride.
Constitution: Carbon strings 11a and 11b wettable with molten Si are inserted into the high-purity molten Si in the graphite crucible through the holes 17a and 17b of the bottom part of the crucible, and are pulled up from the surface of the molten Si to effect the growth of a flat plate Si crystal 19 between both strings. To prevent the leak of the molten Si from the holes 17a and 17b, the carbon strings 11a and 11b should be fine ones. Accordingly, the string has too high flexibility to pass through the molten Si 13. The problem can be eliminated by coating the tip of the string with a silicon nitride protecting film having higher melting point than Si. A fine and flexible carbon string can be passed through the molten Si by this process, and the stable growth of the flat plate Si crystal can be achieved.

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